May 11, 1965 F. K. HILL 3,183,036

UPHOLSTERED FURNITURE

Filed July 3, 1962

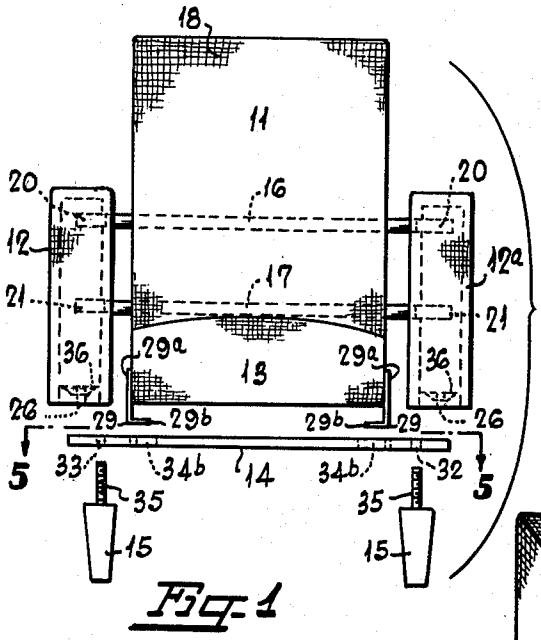


Fig. 1

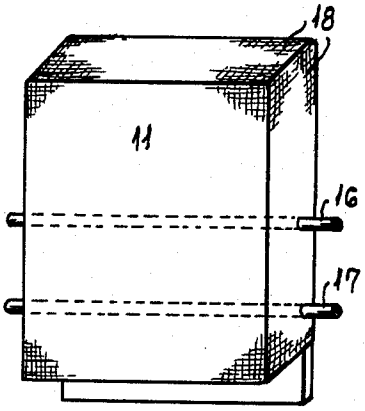


Fig. 2

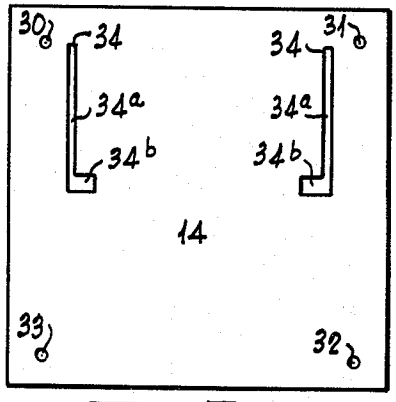


Fig. 5

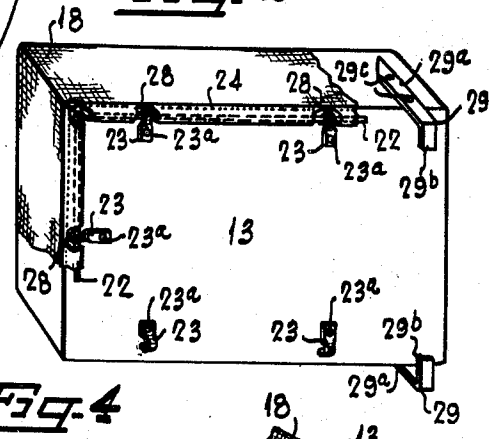


Fig. 4

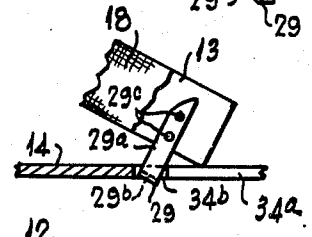


Fig. 7

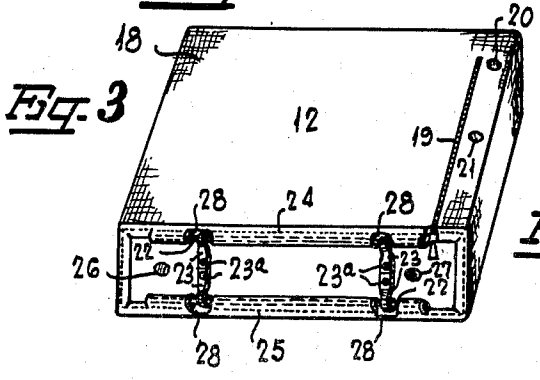


Fig. 3

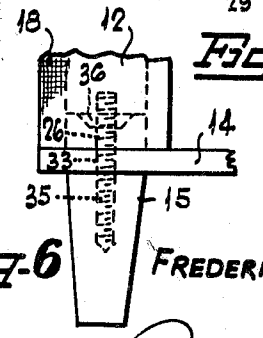


Fig. 6

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UPHOLSTERED FURNITURE

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4 Claims. (Cl. 297—440)

My invention relates to seating furniture and more especially to articles such as chairs, sofas and the like having leg, back, arm, and seat sections detachably secured to one another in a novel manner which permits quick assembly and disassembly.

It is an object of this invention to provide articles of knockdown furniture in which the back sections are supported by and between the arm sections by means of horizontally extensible and contractible connections, and in which the seat-supporting section serves to releasably lock the horizontal connections in contracted position.

Another object of this invention is to provide a knockdown article of seating furniture of the type mentioned above having a seat section confined for movement substantially along a horizontal path disposed transversely of the back section thereof whereby the available seating area may be varied, in combination with means for detaching the seat section from the chair when moved horizontally to its foremost position.

A further object of this invention is to provide means whereby the exterior fabric covering of upholstered chairs and sofas may be removed easily for cleaning and subsequently replaced.

These and other objects and advantages of the invention will become apparent as the detailed description thereof proceeds. The description is to be read with reference to the accompanying drawing, in which like reference numerals indicate like parts, and in which:

FIGURE 1 is a front view of a chair according to the present invention, showing the major components thereof in exploded positions;

FIGURE 2 is a perspective view of the back section of the chair;

FIGURE 3 is a perspective view of one of the chair arm sections;

FIGURE 4 is a perspective view of the chair seat, looking at the edges and underside thereof;

FIGURE 5 is a plan view of the seat-supporting section or platform and taken along line 5—5 in FIGURE 1;

FIGURE 6 is a detail view, typical of the manner in which the legs, platform, and arms of the chair are detachably secured to one another, and

FIGURE 7 is a sectional detail view illustrating the manner of inserting and removing the seat section from the platform.

Referring more particularly to the drawings the numeral 11 denotes a relatively flat chair back, 12 and 12*a* the chair arms, 13 the chair seat, 14 the seat platform, and 15 the chair legs, all of said members being partially assembled in FIGURE 1 for the purpose of illustration.

When the chair components shown in FIGURE 1 have been completely assembled, the back section 11 is supported edgewise by and between arms 12 and 12*a* by means of horizontally extensible and contractible connections, said connections consisting of two round thin-walled metal tubes or rods 16 and 17 which are inserted horizontally through the back, the opposite ends of said tubes protruding beyond opposite sides of the back. The protruding ends of tubes 16 and 17 penetrate horizontal holes or apertures 20 and 21 in arms 12 and 12*a* and engage the framework in the arms to support the back section 11.

Each of the arms 12 and 12*a* is provided with an upholstery fabric cover 18, said cover being removably mounted on the arms by means of a slide fastener 19

extending from the upper portion of the arm to the bottom (FIGURE 3). The bottom inside and outside edges of the fabric upholstery cover 18 are hemmed as at 24 and 25 so as to accommodate a pair of metal rods 22. These rods are inserted into the respective hems from the front toward the back of the arms, said hems being cut away as at 28 to expose the rods 22. Hook fasteners 23 engage the rods 22 at the opposed cut away portions 28 to secure the cover in installed position.

Holes 26 and 27 are provided in the framework of the bottom of arms 12 and 12*a* to permit insertion of vertically disposed threaded leg bolts 35, each of said bolts having the lower end thereof threadably secured in a leg 15 and the upper end projecting upwardly from and alined longitudinally with the leg. It will be observed in FIGURES 1 and 6 that holes 26 and 27 each have secured therein a pressed metal insert 36 having a swaged hole in its center. This hole is threaded to receive the projecting threaded end of leg bolt 35. Inserts 36 are countersunk in the arm framework at the top of holes 26 and 27.

FIGURE 4 is a perspective view of the chair seat 13 in detached position and showing the exposed bottom surface. Attached to the framework of the seat bottom and at the rear thereof are L-shaped brackets 29 which are preferably made of metal, each of said brackets having legs 29*a* and 29*b*. Leg 29*a* of each bracket is secured to the side edge of seat 13 as at 29*c*, and the other leg 29*b* of each bracket extends inwardly beneath the seat bottom. Legs 29*b* are substantially alined with one another and spaced from the lower surface of the seat 13 a distance somewhat greater than the thickness of seat-supporting platform 14 for the reasons stated in detail below (FIGURE 7).

FIGURE 5 shows the platform 14 detached from the chair. The platform is preferably made of laminated wood or of metallic extrusions formed and shaped to accomplish the purpose intended. L-shaped slots 34 are cut in platform 14 to accommodate seat brackets 29, each of said slots having a long leg 34*a* and a short leg 34*b*.

When the chair parts are assembled as shown in FIGURE 6, the upper end of a leg bolt 35 penetrates each of the holes 30, 31, 32, and 33 in platform 14 as well as each hole 26 and 27 in the chair arms 12 and 12*a*, the upper end of each bolt being threadably secured in previously described metal insert 36. Legs 15 are preferably made of wood or light metal.

In order to assemble the seat 13 upon seat-supporting section or platform 14, the front end of the seat is elevated as shown in FIGURE 7 and the bracket legs 29*b* are inserted through platform leg slots 34*b*; and then the front end of the seat is lowered to permit legs 29*b* to slide beneath the platform and rearwardly and horizontally of the chair to the desired position.

Disassembly of the chair is accomplished according to the following procedure: The seat 13 is moved forwardly and horizontally of the assembled chair until bracket legs 29*b* substantially coincide with leg slots 34*b* in platform 34. The front edge of the seat is then lifted into an approximately vertical position with relation to platform 14 during which the bracket legs 29*b* will pass upwardly through slots 34*b* to thus permit the seat to be lifted from the platform. Next, the chair is laid upon its side with arm 12, for example, resting upon a horizontal surface. In this position, the two uppermost legs 15 are exposed for easy manipulation. The uppermost legs 15 and their respective threaded bolts 35 are then turned to become disengaged from inserts 36 and withdrawn from the holes in the chair arm and platform. With the uppermost arm 12*a* thus detached from platform 14, the arm can be withdrawn from the uppermost ends of tubing members 16 and 17 so that

the back **11** and the lower end of the tubing members can be lifted from the lowermost arm **12**.

Next, the lowermost arm **12** is detached from platform **14** by removal of the remaining lowermost legs **15** in the same manner as previously described in connection with the uppermost legs, thereby completing the disassembly of the back, arms, seat, seat platform and legs of the chair.

The exterior upholstery fabric covering **18** is removed from arms **12** and **12***a* as follows: The arm **12**, for example, is placed on a horizontal surface with its inside positioned upwardly so as to expose slide fastener **19**. The handle of the slide fastener is moved toward the bottom of the arm to release the joined edges of the fabric. Next, the hooks **23** are detached from rods **22** to permit the latter to be withdrawn from their respective hems **24** and **25**. The fabric **18** is now loosened and removed from the arm of the chair. It is understood that the upholstery stuffing materials are held in position by suitable means such as an inner cover of light-weight muslin, which inner cover is ordinarily not removed but installed as a permanent part of the arm.

Exterior upholstery fabrics on the back and seat are held in position similarly to that of the arm but without slide fasteners. It will be noted in FIGURE 4, that a plurality of hooks **23** are employed to fasten the cover on seat **13**, one end of each hook being secured to rod **22** and the other end to the seat bottom surface as at **23***a*.

Assembly of the component parts of the chair is accomplished by reversing the above-described process of disassembly.

It is to be particularly noted that all assembly and disassembly processes described above are accomplished without the aid of tools or wrenches, employing manual means only.

While the invention has been described in its preferred embodiment, it is understood that the same is capable of modifications within the scope and spirit of the subjoined claims.

Having thus described my invention, I claim:

1. In a knockdown article of furniture having a plurality of supporting leg members, a horizontally disposed seat platform member, a pair of vertically disposed side arm members, and a relatively flat vertically disposed back member, the combination of horizontally releasable means for supporting said back member edgewise by and between said arm members, said means including at least one horizontally disposed rod extending through and having its opposite ends projecting beyond the opposite edges of said back member, the proximate faces of said side members having alined apertures therein for receiving said projecting rod ends; and vertically releasable means carried by said leg members and penetrating said platform member for locking said projecting rod ends of the back member in the alined apertures of said side members.

2. In a knockdown article of furniture having a pair of vertically disposed side arm members and a vertically disposed and relatively flat back member, the combination of horizontally releasable means for supporting said back member edgewise by and between said arm members, said means including a pair of parallel horizontally disposed rods connected to and having their respective opposite ends projecting beyond the opposite edges of said back member, the proximate faces of said side members having alined apertures therein for receiving said projecting rod ends; a platform member for supporting said arm members, leg members for supporting said platform member, and means for releasably locking said back and arm members in supported position, said last-named means including vertically disposed bolts extending from said leg members, through said platform member, and into said arm members.

3. In an article of furniture as defined in claim 2 and further comprising a seat mounted upon said platform member for movement in a horizontally disposed path rearwardly toward and forwardly away from said back member, interengaging means between the rear portion of said seat and said platform member for confining the seat substantially in said path during said forward and rearward seat movement, and means operable in the foremost position of said seat for releasing said interengaging means whereby said seat is detached from said platform.

4. In a knockdown article of furniture having a horizontally disposed seat platform member, a pair of vertically disposed side arm members, and a relatively flat vertically disposed back member, the combination of horizontally releasable means for supporting said back member edgewise by and between said arm members, vertically releasable means including said platform member for releasably locking said horizontally releasable means in supporting position, said platform having at least one slot extending rearwardly toward said back member, a seat mounted on said platform member and having a projection extending downwardly from the rear portion of the latter through said slot whereby said seat is guided for movement in a horizontally disposed path rearwardly toward and forwardly away from said back member, and a laterally extending projection on the lower end of said first projection for confining the latter in said slot during forward and rearward movement of said seat member, said platform member having a second slot at the front end of said first slot and coincidable with said laterally extending projection whereby the seat may be released from said platform member.

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